

REMARKS

Summary of substantive patentability issue

Amended independent Claims 1, 6, 10, and 14 recite at least one feature not understood to be disclosed or suggested by the patent to Komori. Therefore, the application is in allowable form.

Status of the Claims

Claims 1-17 are pending, with Claims 1, 6, 10, and 14 being independent. Claims 1-17 have been amended for reasons unrelated to patentability to improve their form. In addition, Claims 3 and 5 have been amended to overcome a formal objection thereto, and Claims 1, 6, 10, and 14 have been amended to overcome a substantive rejection.

Requested Action

Applicant respectfully requests the Examiner to reconsider and withdraw the outstanding objection and rejection in view of the foregoing amendments and the following remarks.

Request for Clarification

The cover page of the March 9, 2005 Office Action indicates that Claims 8 and 12 are rejected, but the remainder of the Office Action does not mention these claims or the grounds of rejection. Applicant requested clarification of this issue in a Request dated March 24, 2005, but has not yet received a response to that request. Accordingly, Applicant again respectfully requests the issuance of a paper clarifying the status of Claims 8 and 12.

Allowable Subject Matter

Applicant gratefully acknowledges the indication that Claims 4 and 16 contain allowable subject matter and would be allowed if redrafted in independent form. Applicant has not redrafted these claims in independent form because the independent claims from which they depend are believed to be allowable for the reasons discussed below.

Formal Objection

Claims 3 and 5 are objected to for minor informalities therein. In response, while not conceding the propriety of the objection, Applicant has amended these claims to address the points raised by the Examiner, thereby rendering the objection moot.

Substantive Rejection

Claims 1-3, 5-7, 9-11, 13-15, and 17 have been rejected under 35 U.S.C. § 102, as anticipated by U.S. Patent No. 6,782,215 (Komori).

Response to Substantive Rejection

In response, while not conceding the propriety of the rejection, independent Claims 1, 6, 10, and 14 have been amended. Applicant submits that as amended, these claims are allowable for the following reasons.

Independent Claim 1 relates to an image forming apparatus to which a process cartridge is detachably mountable. The process cartridge comprises an image bearing member, a charging

member configured and positioned to electrically charge the image bearing member, and a memory medium having a memory area.

Claim 1 has been amended to recite that the memory area is configured to store information relating to a charging current to be applied to the image bearing member by the charging member for a non-image-formation period in which no image is formed on the image bearing member and in which the image bearing member operates to perform an image formation operation.

Claim 1 also recites that the apparatus comprises a control unit.

Claim 1 has also been amended to recite that the control unit is configured to control a voltage to be applied to the charging member. In addition, Claim 1 has been amended to recite that the control unit is configured to switch the voltage in accordance with the information relating to the charging current stored in the memory medium.

This non-image-formation period in which no image is formed on the image bearing member and in which the image bearing member operates to perform an image formation operation can comprise, but is not limited to, for example, a pre-rotation period (in which the image forming apparatus is ready to form an image), a sheet-interval period (which occurs after an image has been formed on a sheet and before an image is formed on the next sheet), and a post-rotation period (between the time at which an image is formed on the last sheet and the time for carrying out a post-image formation operation), as discussed pages 30-36 of the specification, for example.

In contrast, the patent to Komori is not understood to relate to an image forming apparatus to which is detachably mountable a process cartridge comprising a memory medium

having a memory area configured to store information relating to a charging current to be applied to an image bearing member by a charging member for a non-image-formation period in which no image is formed on the image bearing member and in which the image bearing member operates to perform an image formation operation, as recited by amended Claim 1. Therefore, this patent is also not understood to disclose or suggest a control unit configured to switch the voltage in accordance with the information relating to the charging current stored in the memory medium, as also recited by amended Claim 1.

The Office Action cites column 5, lines 3-20 to show the claimed memory means. This portion of the Komori patent states:

In addition, the charging voltage $-V_{mc}$ is changed and becomes $-(V_{mc}+\alpha)$, and the transfer current I_{tr} is detected in the state when the discharge unit 11 is turned on. In this case, the detected transfer current is indicated as " I_{tr2} ". That is, the transfer current I_{tr} is detected at two points in the state when the discharge unit 11 is turned on. The charging voltage $-V_{mc0}$ at point A, in which a straight line passing through the two points intersects with a line representing $I_{tr}=I_{tr0}$, is calculated by the CPU 12, and the calculated charging voltage is stored in the memory (memory unit) 13.

In a printing procedure, the calculated charging voltage $-V_{mc0}$ stored in the memory (memory unit) 13 in the initial operation is used as the charging voltage supplied to the photosensitive drum 2 through the charging roller 1 during a next revolution of the photosensitive drum 2. While the photosensitive drum 2 makes one revolution by the charging voltage $-V_{mc0}$, the surface potential of the photosensitive drum 2 becomes a desired potential.

But the storing of such a charging voltage in the memory unit 13 is not understood to be related to the storing of information relating to a charging current to be applied to an image bearing member by a charging member for a non-image-formation period in which no image is

formed on the image bearing member and in which the image bearing member operates to perform an image formation operation, as recited by amended Claim 1.

For this reason, amended Claim 1 is not understood to be anticipated by the Komori patent. Therefore, Applicant respectfully requests that the rejection of Claim 1 over the Komori patent be withdrawn. And since independent Claims 6, 10, and 14 have been amended in a similar manner, they are understood to be allowable for similar reasons and therefore, Applicant also respectfully requests that the rejection of these claims also be withdrawn.

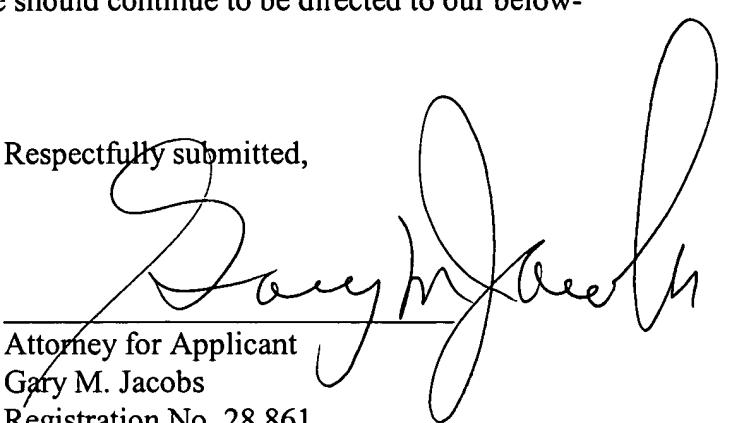
The dependent claims are allowable for the reasons given for the independent claims and because they recite features that are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

Conclusion

In view of the above amendments and remarks, the application is now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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